

Superfund Program
Post-Decision Proposed Plan

U.S. Environmental Protection Agency
Region II

D'Imperio Property Site

**EPA ANNOUNCES POST-DECISION
PROPOSED PLAN**

This Post-Decision Proposed Plan identifies the proposed change to the third component of the remedy selected in the March 1985 Record of Decision (ROD) for the D'Imperio Property Site and provides the rationale for this modification. As described below, the preferred alternative for addressing contaminated subsurface soils at the site involves treatment utilizing a technology known as soil vapor extraction (SVE). Under the 1985 ROD, these contaminated soils would be capped in place. The Post-Decision Proposed Plan includes summaries of all the cleanup alternatives evaluated for use at this site.

This document is issued by the U.S. Environmental Protection Agency (EPA), the lead agency for site activities, and the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select a final soil remedy for the site after reviewing and considering all information submitted during the 30-day public comment period. EPA, in consultation with NJDEP, may modify the Preferred Alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

EPA is issuing this Post-Decision Proposed Plan as part of its community relations program under section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, and Section 300.435(c)(2)(ii) of the National Contingency Plan (NCP). This Post-Decision Proposed Plan summarizes information that can be found in greater detail in the Soil Investigation and Soil Evaluation Reports and other documents contained in the Administrative Record file for this site. EPA and NJDEP encourage the public to review these documents to gain a more comprehensive understanding of the site and Superfund activities that have been conducted at the site.

Dates to remember:

MARK YOUR CALENDAR

PUBLIC COMMENT PERIOD:

November 20, 2002 - December 20, 2002

U.S. EPA will accept written comments on this Post - Decision Proposed Plan during the public comment period.

PUBLIC MEETING:

Wednesday, December 11, 2002 at 7:00 PM

U.S. EPA will hold a public meeting to explain the Post-Decision Proposed Plan and all of the alternatives presented in the Soil Evaluation Report. Oral and written comments will also be accepted at the meeting. The meeting will be held at the **Township of Hamilton Town Hall, Main Meeting Room, 6101 Thirteenth Street, Mays Landing, New Jersey.**

For more information, see the Administrative Record at the following locations:

U.S. EPA Records Center, Region II
290 Broadway, 18th Floor.
New York, New York 10007-1866
(212) 637-3261
Hours: Monday-Friday - 9 am to 5 pm

Hamilton Township Clerk's Office
6101 Thirteenth Street, Room 201

SITE HISTORY

The D'Imperio Property Site is located within a triangle formed by the intersections of U.S. Route 322 (Black Horse Pike), U.S. Route 40 and Cologne Road in Hamilton Township, Atlantic County, New Jersey. The site includes a 15-acre parcel of undeveloped property. Within the parcel is a former disposal area consisting of approximately 1 ½ acres, where wastes were illegally dumped. The site is situated in a semi-rural region of Atlantic County within the New Jersey Pinelands National Reserve, which is classified as a Regional

Growth Area. This designation allows for commercial, industrial, and moderately high residential development. There are several commercial businesses surrounding the site and many residential developments in the area. Approximately twenty private residences with drinking water wells are located within a one mile radius of the site, with the nearest residential well about 300 feet upgradient of the site. The nearest surface water consists of two wetlands to the north and south of the property, approximately 2,000 and 4,000 feet away, respectively. The north wetland is named Babcock Swamp and the south wetland is unnamed. Both of the wetlands are drained by tributaries to the Great Egg Harbor River.

The D'Imperio family has owned the property since 1968. The property had been used by the Lightman Drum Company (LDC), Inc. and Jerome Lightman for illegal dumping of hazardous waste material beginning in mid-1974 through 1976. During the 1970's, LDC and Jerome Lightman were engaged in the business of reconditioning steel drums and transporting hazardous waste material. LDC would pick up drums containing hazardous substances from a number of generators, and transport the waste material to numerous unauthorized disposal sites. The generators of this hazardous material along with LDC and Jerome Lightman are potentially responsible parties (PRPs) for this site.

In the late 1970's, the Atlantic County Public Health Department learned of the illegal waste disposal area behind the Dennis Motel (a motel located east of the property) and informed NJDEP of the existence of this area. NJDEP believed the disposal area was part of the motel property, and directed the Dennis Motel to investigate and dispose of the waste material. The Dennis Motel did not comply with this directive from NJDEP.

In 1980, a limited field investigation conducted by a potential developer of the property indicated that the groundwater underlying the site was contaminated with volatile organic compounds (VOCs). Subsequently, NJDEP performed a more thorough investigation of the site. EPA was notified by NJDEP of the existence of a waste disposal area in 1981.

In early 1982, EPA began an investigation of the site and a Remedial Action Master Plan (RAMP) was completed in August 1982. This report summarized the existing data regarding the site and identified tasks necessary to

complete a Remedial Investigation and Feasibility Study (RI/FS) for the site. In 1982, EPA installed a security fence around the property. The site was finalized on the National Priorities List on September 1, 1983.

From September 1983 through February 1985, EPA conducted RI/FS activities to delineate the extent and nature of the contamination at the site and to develop remedial alternatives to address the contamination found within the soils and groundwater. The results of this investigation indicated that the waste disposal activities had resulted in the contamination of the underlying groundwater in the Bridgeton and Cohansey aquifers. The Cohansey aquifer is a source of drinking water for the area. In addition, the soils adjacent and underlying the disposal area were also found to be contaminated. The result of samples obtained from the RI/FS indicated that high levels of volatile organics and metals were detected in the groundwater, and base neutrals and acid compounds, and volatile organics were detected in the soils.

Based on the RI/FS, EPA issued a ROD selecting a remedy for the site on March 27, 1985. The basic components of the remedy are as follows: 1) the pumping and treatment of contaminated groundwater from two affected aquifers before re-injection into the aquifer or surface water discharge; 2) the excavation and transportation of approximately 3,900 cubic yards of surficial drums, and contaminated waste and soils to a Resource, Conservation and Recovery Act (RCRA)-approved disposal facility; and 3) the construction of a RCRA cap after the completion of the excavation activities.

First Component: Soil Removal

Beginning in April and continuing through September 1985, EPA conducted remedial design activities for the excavation component of the response action selected in the ROD. EPA and the U.S. Army Corps of Engineers (USACE) began on-site construction for the excavation and off-site disposal of buried drums and contaminated waste material on November 5, 1986. The removal of approximately 82 drums and 3,900 cubic yards of contaminated soil, with disposal to an off-site RCRA-approved facility, was completed in March 1987. The excavation area was subsequently backfilled, graded, and re-vegetated.

Second Component: Groundwater Remediation

In April 1992, EPA initiated remedial design activities for the groundwater recovery and treatment system. During this design process, EPA selected re-injection of treated water into the Bridgeton and Cohansey aquifers, instead of surface water discharge. EPA finalized the design of the groundwater remedy in September 1992.

On August 5, 1993, EPA issued a Unilateral Administrative Order (UAO) directing the PRPs at the site to commence with the groundwater component of the remedy selected in the 1985 ROD. Subsequently, two other PRPs were included in a supplemental UAO issued by EPA on August 22, 1995. A group consisting of 14 PRPs are currently performing the groundwater component of the 1985 ROD pursuant to the two UAOs issued by EPA.

As part of the 1993 UAO, EPA required the PRPs to first initiate a groundwater investigation to determine if the areal extent of the contaminated plume had changed since the completion of the RI/FS. This was performed in two phases: Phase I (Bridgeton and Upper Cohansey Investigation) was completed in 1994, and Phase II (Lower Cohansey Investigation) was completed in 1995. The results indicated that the contamination previously reported in the RI/FS had migrated significantly further downstream within the Bridgeton and Cohansey aquifers. In addition, data obtained from the investigation was also used to construct a groundwater flow model. Overall, the conclusions from the investigations helped form the basis for modifying the 1992 EPA remedy design for the groundwater treatment system.

The design modifications for the groundwater extraction, treatment, and re-injection system were completed and approved by EPA in May 1995. By June 1995, the PRPs had begun construction of the groundwater treatment system with the installation of the first extraction and re-injection wells. This was followed by the construction of the groundwater treatment plant which commenced in December 1995. The groundwater extraction, treatment, and re-injection system was completed in 1996 and has been operational since August 1997. The PRPs are currently providing operational maintenance and groundwater performance monitoring of the system.

SCOPE AND ROLE OF THE ACTION

This is a proposed amendment to the March 1985 ROD for the D'Imperio Property Site. The 1985 ROD selected three remedy components to address the threats posed by two contaminated media: soils and groundwater. Two of the three components, the installation of a groundwater treatment system and the excavation of buried drums and contaminated soils, have been completed. The third component addressed the subsurface soil contamination. It called for the construction of a RCRA cap after the excavation of source material and re-grading of the former disposal area. The proposed modification of the remedy calls for the removal of residual levels of contaminants of concern in the vapor phase from the unsaturated zone, with on-site treatment.

REMEDIAL ACTION OBJECTIVES

The following remedial action objectives for residual source material within the subsurface soil addresses the human health risks and environmental concerns at the D'Imperio Property site:

- Reduce or eliminate the risk of human exposure to the contaminated soil
- Reduce or eliminate further contaminant migration to the groundwater
- Mass removal of constituents.

As described in the 1984 RI Report and the 1985 ROD, the potential risks to human health and the environment associated with the source material were direct contact with the contaminated soils and continued migration of contaminants to the groundwater. Access restrictions such as a security fence have reduced the potential for exposure to the residual contaminated soils. In addition, the excavation completed in 1987, and the operation of a groundwater treatment system installed in 1996 have also controlled the risks associated with the site. Any future land use is expected to be non-residential (commercial and industrial) with institutional controls implemented to restrict future residential development if they are determined to be necessary.

Because subsurface soils (below four feet) are contaminated at levels that pose a direct contact concern and continue to be a source of groundwater contamination, this proposed action would reduce the threat by addressing the contaminated soils above the

water table in excess of the more stringent of the New Jersey Soil Cleanup Criteria (NJSCC) for Impact to Groundwater or Direct Contact, as indicated on Table 1, to the extent practicable. For those alternatives that involve excavation, it is expected that excavation would be no deeper than 15 feet below the ground surface.

BASIS FOR REMEDY MODIFICATION

After completion of the groundwater remedy, the PRPs performed several soil investigations in the former disposal area. These efforts have augmented EPA's investigation of the site during the RI/FS. In October 1998, the PRPs performed a soil study, as required by the 1993 UAO, to determine if any source material remained on-site that may pose a threat to human health and the environment. An evaluation of the analytical data yielded three conclusions. First, the depth of the removal action performed in 1987 may not have eliminated the direct contact pathway. Second, VOCs were the only contaminants detected within the subsurface soils and continue to impact the groundwater underlying the site. Finally, the installation of a RCRA cap over the former disposal area would also provide the disadvantage of covering/filling a wetlands area previously identified in the investigation phase. These data are summarized in the May 1999 Soils Sampling Report.

Following a review of the results in the Soil Sampling Report, the PRPs performed an additional soils investigation in June 2000, as required by the Modified UAO issued in January 2000, to delineate the extent and nature of the remaining source material found in the subsurface soils at the former disposal area. Data summarized in the August 2000 Soils Investigation Report along with the previous Soil Sampling Report dated May 1999 were utilized to develop the Soils Evaluation Report dated September 2002. This report analyzed other alternative methods to deal with the residual source material, and is the basis for this proposed modification to the existing remedy (RCRA Cap) selected in the 1985 ROD.

SUMMARY OF SOIL REMEDIAL ALTERNATIVES

Remedial alternatives for the D'Imperio Property site are presented below. All of these alternatives address the residual source material in combination with the remedial activities already implemented. Based upon a

review of all available documentation, the soil does not contain listed hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). In addition, based on a soil sample analysis for Toxicity Characteristic Leaching Parameter (TCLP) performed to date, none of the contaminated soil at the site is expected to be RCRA characteristic waste (*i.e.*, it exhibits characteristics of toxic, ignitable, reactive or corrosive hazardous waste, as defined by RCRA). However, data collected during the soil investigations at the site indicated that concentrations of VOCs exceed the Universal Treatment Standards specified in 40 CFR Part 268.48 of the Land Disposal Restrictions (LDRs). Therefore, a portion of the soil excavated and removed from the area of contamination would be subject to off-site treatment prior to disposal at an approved RCRA facility. All remedies involving such activities will include soil testing for hazardous waste characteristics.

While the soil does not contain listed hazardous waste as defined by RCRA, two of the remedial alternatives include common elements for incorporating off-site disposal measures to reflect the concentration of contaminants found at the site. The soil contamination associated with the former disposal area would be placed in a RCRA Subtitle C hazardous waste landfill based upon the high contaminant concentrations.

To satisfy the remedial action objectives, an estimated 7,600 cubic yards of contaminated soils within the former disposal area would require remediation by each of the active alternatives. Only the source control (SC) alternatives "full excavation with off-site disposal" and "soil vapor extraction" are expected to attain the remedial action objectives (RAOs).

Several of the remedies may require institutional controls (*e.g.*, a deed notice or an easement) to limit the use of the property. The use of restrictions is discussed in each alternative as appropriate. The type of restriction will need to be determined after completion of the remedial alternative selected in the ROD Amendment. Consistent with expectations set out in the Superfund regulations, none of the remedies rely exclusively on institutional controls to achieve protectiveness. The time frames below for construction do not include the time for remedial design or the time to procure contracts.

Alternative SC-1: No Action

Estimated Capital Cost: \$0
Estimated Annual O&M Cost: \$0
Estimated Present Worth Cost: \$0
Estimated Construction Time frame: None

Regulations governing the Superfund program generally require that the “no action” alternative be evaluated to establish a baseline for comparison. Under this alternative, EPA would take no action at the site to prevent exposure to the soil contamination. The contaminated soil would be left in place without treatment. The alternative considers remedial activities previously implemented to control potential exposure pathways from the site. However, it does not further reduce impact to groundwater or provide for mass removal of constituents in the soils.

Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, EPA would review such action at least every five years.

Alternative SC-2: Limited Action

Estimated Capital Cost: \$15,200
Estimated Annual O&M Cost: \$3,500
Estimated Present Worth Cost: \$83,800
Estimated Construction Time frame: 3 months

The alternative considers the previously implemented remedial activities and existing engineering controls at the site in conjunction with an appropriate institutional control mechanism (eg., easement, deed notice). A deed notice would provide specific information about the site and previous implemented remedial activities to future property owners so that they would be notified of the environmental conditions. Institutional controls would be put in place to limit the use of the area for any purpose

inconsistent with proper waste management. This alternative would require biennial certification and controlled site access for the deed notice, with necessary operation and maintenance (O&M), which consists of continued groundwater monitoring. However, this alternative does not remove the residual source from impacting the groundwater.

Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, EPA would review such action at least every five years.

Alternative SC-3: On-Site RCRA Capping

Estimated Capital Cost: \$502,500
Estimated Annual O & M Cost: \$5,600
Estimated Present Worth Cost: \$612,200
Estimated Construction Time frame: 15 months

The contaminated soil within the former disposal area would be capped in place in accordance with RCRA Subtitle C regulations. The RCRA Cap is the existing remedy selected in the 1985 ROD. Based on the soil investigations, the horizontal extent of the impacted soil is estimated to be no smaller than 2/3 of an acre. Therefore, a 1-acre cap would be installed to reduce the potential for exposure to the impacted soil and minimize groundwater infiltration through controlled migration of contaminants from the soils to groundwater.

The RCRA cap includes the placement of several low permeability layers above the contaminated soils to stabilize surface soil and restrict surface water migration into the soil. From bottom to top, a typical RCRA cap consists of, 1) a graded sub-base layer, 2) a geotextile layer, 3) a gas vent layer, 4) a low permeability clay layer, 5) an impermeable synthetic membrane layer, 6) a

SUMMARY OF SOIL REMEDIAL ALTERNATIVES		
Medium	Source Control Alternatives	Description
SOIL	SC-1	No Action
	SC-2	Limited Action
	SC-3	On-Site RCRA Capping
	SC-4	Excavation; Off-Site Disposal with Treatment
	SC-5	Limited Excavation; Off-Site Disposal with Treatment
	SC-6	Soil Vapor Extraction

sand drainage layer, and 7) a vegetated soil layer. Because of the limited clay availability for this area, a geosynthetic clay liner (GCL) will be used instead of a low permeability clay layer.

Institutional controls (eg., easement, deed notice) would be required to limit the use of the area for any purpose inconsistent with proper waste management. This alternative would also require O&M, consisting of maintaining the 1-acre vegetative soil cover and repairing the cap as necessary.

Although direct contact exposure would not pose a risk with a cap, restricting access to the capped area would be required. Signs and fences would be posted around the perimeter of the area providing notice that hazardous material is contained in the area.

Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, EPA would review such action at least every five years.

Alternative SC-4: Excavation; Off-Site Disposal with Treatment

Estimated Capital Cost: \$3,333,300
Estimated Annual O& M Cost: \$ 0
Estimated Present Worth Cost: \$3,333,300
Estimated Construction Time frame: 8 months

Approximately 7,600 tons of soil would be excavated to NJSCC for Impact to Groundwater and transported off-site for disposal. Prior to transportation, the excavated soil would be tested for hazardous waste characteristics as defined by 40 CFR 261. Soil that fails characteristic testing would be transported to a RCRA Subtitle C facility for treatment prior to disposal. Because contaminant concentrations exceed the universal treatment standards for LDR, EPA estimates that of the 7,600 tons of soil requiring transportation and disposal, approximately 800 tons would require treatment before placement into a RCRA Subtitle C Landfill, and 6800 tons would not require treatment before placement into a RCRA Subtitle C Landfill. After completion of the soil excavation, the site would be backfilled and re-graded with clean soil.

Since this alternative is expected to achieve the identified remediation goals that are protective for residential land use, institutional controls, such as a deed notice or an easement, are not required.

Alternative SC-5: Limited Excavation; Off-Site Disposal with Treatment

Estimated Capital Cost: \$1,437,300
Estimated Annual O& M Cost: \$1,000
Estimated Present Worth Cost: \$1,456,900
Estimated Construction Time frame: 10 months

Under this alternative, only the most highly-contaminated soils are removed. Approximately 1,600 tons of soil would be excavated to NJSCC for Non-Residential Direct Contact and transported off-site for disposal. Prior to transportation, the excavated soil would be tested for hazardous waste characteristics as defined by 40 CFR 261. Soil that fails characteristic testing would be transported to a RCRA Subtitle C facility for treatment prior to disposal. Because contaminant concentrations exceed the universal treatment standards for LDR, EPA estimates that of the 1,600 tons of soil requiring transportation and disposal, 800 tons (assumes 50% of soil) would require treatment before placement into a RCRA Subtitle C Landfill, and 800 tons would not require treatment before placement into a RCRA Subtitle C Landfill. After completion of the soil excavation, the site would be backfilled to grade with clean soil.

Since this alternative would achieve only the NJDEP non-residential direct contact soil cleanup criteria that are protective for commercial and industrial land use but would not achieve levels that would allow for unrestricted use, institutional controls, such as a deed notice or an easement, would be required.

Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, EPA would review such action at least every five years.

Alternative SC-6: Soil Vapor Extraction (SVE)

Estimated Capital Cost: \$176,500
Estimated Annual O& M Cost: \$56,000
Estimated Present Worth Cost: \$283,700
Estimated Construction Time frame: 5 months

The residual contaminants from within the subsurface soil (approximately 7,600 cubic yards) would be extracted in the vapor phase and treated through an on-site vapor treatment system. This alternative will consider several treatment options during the remedial design phase including granular activated carbon and thermal oxidization as well as treating the vapors at the existing groundwater treatment system. In each case, a permit equivalent for air pollution control would be required. In addition, any condensation and groundwater collected by this soil vapor treatment system would be pumped to the groundwater treatment system for treatment and disposal.

Since this alternative is expected to achieve the NJSCC for Impact to Groundwater which are protective for residential land use, institutional controls, such as a deed notice or an easement, are not likely to be required. However, the engineering controls (i.e., security fence and access restrictions) already in place would need to be maintained for the duration of operation of the system. This alternative requires O&M which consists of operational maintenance and performance monitoring of the SVE system, and post-remediation soil sampling to ensure that the identified cleanup goals would be met by this system.

Because this alternative is expected to achieve the cleanup goals and not leave hazardous substances, pollutants or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, a five-year review may not be required.

EVALUATION OF ALTERNATIVES

Nine criteria are used to evaluate the different alternatives individually and against each other in order to select an alternative. This section of the Post-Decision Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The nine evaluation criteria are discussed below. The "Evaluation of Alternatives" can be found in the Soils Evaluation Report, dated June 2002.

1. Overall Protection of Human Health and the Environment

All of the alternatives except the "no action" alternative would provide adequate protection of human health and the environment by eliminating, reducing, or controlling

risk through treatment, engineering controls, and/or institutional controls. Alternative SC-2 (limited action) provides protection through the placement of additional institutional controls, with the necessary operation and maintenance requirements. Alternative SC-3 (capping) would provide protection by reducing or eliminating direct contact exposure to contaminated soils and preventing significant leakage of these contaminated source materials to the groundwater by permanently containing the area with a cap; however, long-term maintenance and monitoring would be required to ensure that the remedy remained protective. Alternatives SC-4 (excavation), SC-5 (limited excavation) and SC-6 (soil vapor extraction) treat and/or remove soil with contaminants of concern concentrations above the NJSCC, and therefore, would protect both human and environmental receptors from contact with contaminants in the soil.

Alternative SC-5 would only remove the most highly-contaminated soils for transport to an off-site facility for treatment and disposal. Alternative SC-4 would remove all contaminated soil for transport to an off-site facility for treatment and disposal. Alternative SC-6 would remove all residual contaminants of concern in the vapor phase for transport to an on-site recovery and treatment system.

Under the New Jersey Brownfields and Contaminated Site Remediation Act, N.J.S.A. 58:10B-1 et. seq., an acceptable cancer risk for human carcinogens at 1×10^{-6} (one-in-one-million) and an acceptable non-carcinogenic risk for any given effect to a value not to exceed the Hazard Index value of 1.0 has been determined. These established acceptable risk values are for any particular contaminant and not for the cumulative effects of more than one contaminant at a site. The NJSCC for Impact to Groundwater were developed to protect groundwater from exceeding the risk-based New Jersey Groundwater Quality Criteria due to the leaching of contaminants from the soil.

Soil samples collected from the former disposal area indicate the presence of VOCs at elevated levels which exceed the NJSCC for Impact to Groundwater. Because these VOCs act as a continuing source of contaminants to the groundwater, soil remediation is required.

2. Compliance with ARARs

Actions taken at any Superfund site must meet all applicable or relevant and appropriate requirements (ARARs) for federal and state law or provide grounds for invoking a waiver of these requirements. There are no chemical-specific ARARs for the contaminated soils. The cleanup levels identified as the remediation goals for the site are the NJSCC, as indicated on Table 1, to the extent practicable. The more stringent of the NJSCC for Impact to Groundwater or Direct Contact would address the sources of groundwater contamination in the deeper soils. Alternatives SC-4 (excavation) and SC-6 (soil vapor extraction) would satisfy these cleanup goals. Alternative SC-5 (limited excavation) would only remove soils exceeding the Non-Residential Direct Contact Soils Cleanup Criteria. Alternatives SC-2 (limited action), SC-3 (capping), and SC-5 (limited excavation) would require institutional controls, such as an easement or deed notice, because soils would continue to exceed the Residential Direct Contact Soil Cleanup Criteria.

There are action- and location-specific ARARs which apply to the contaminated soils. Alternatives SC-2 through SC-6 comply with these requirements as follows:

Because a wetland area was identified within 150 feet of the site, the Freshwater Wetlands Act requires a transition area waiver for special activity, such as conducting remedial work activities at the site. In addition, since the site is within a “regional growth area” of the Pinelands National Reserve, it is subject to the New Jersey Pinelands Act N.J.S.A. 13.18A-1 *et. seq.*, which restricts development and other activities within the Pinelands. Alternatives SC-3 through SC-6 would comply with these location-specific ARARs.

The action-specific ARARs which apply to the contaminated soils include the applicable portions of the New Jersey Technical Requirements for Site Remediation and RCRA, and the operational requirements for protection of ambient air quality.

Alternatives SC-2 through SC-6 would comply with the applicable portions of the New Jersey Technical Requirements for Site Remediation and Alternative SC-6 (soil vapor extraction) would also comply with the operational requirements for protection of ambient air quality.

RCRA is a federal law that mandates procedures for treating, transporting, storing, and disposing of hazardous substances. All portions of RCRA that are applicable or

relevant and appropriate for the contaminated soils would be met by Alternatives SC-3 through SC-6.

3. Long-term Effectiveness and Permanence

Alternative SC-2 (limited action) would require institutional controls to address any future potential risks associated with residential development. Alternative SC-3 (capping) would reduce potential risks due to dermal contact and minimize the leaching of contaminants from soil to groundwater. However, the cap would require regular inspection and repair to remain effective, and future use of the site would be limited. Under Alternative SC-4 (excavation), all excavated contaminated soil would be removed from the site and, therefore, no long-term control would be required. Alternative SC-5 (limited excavation) would excavate and remove only the most highly contaminated soil; therefore, long-term control would be required. Alternative SC-6 (soil vapor extraction) would provide recovery and treatment for the constituents of concern. Although the recovery and treatment under Alternative SC-6 is a proven technology for the constituents of concern, a pre-design investigation would be necessary to determine the site-specific soil characteristics that may impact the effectiveness of the SVE system. To ensure that Alternative SC-6 is effective for the long-term, the design would allow for flexibility to adjust the system. Alternatives SC-4 and SC-6 meet the criteria the best.

4. Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment

Alternative SC-2 (limited action) would not reduce the mobility, toxicity or volume of the constituents of concern. Alternative SC-3 (capping) would not achieve any reduction in the toxicity and volume of the on-site contaminants. However, SC-3 would substantially reduce the mobility of the contaminants through containment. Alternatives SC-4 (excavation), and SC-5 (limited excavation) would remove contaminants from the site for off-site treatment, when required, and disposal, thereby reducing the toxicity, mobility, and volume of the contaminants. However, Alternative SC-5 removes only the most contaminated soils, leaving behind soils that are still above the identified remediation goals. Alternative SC-6 (soil vapor extraction) would also significantly reduce toxicity, mobility and volume of contaminants through on-site recovery and treatment.

5. Short-term Effectiveness

All of the active alternatives involve at least some excavation (site disturbance) and thus present a potential for minor short-term challenges. The “limited excavation” and “excavation” alternatives would result in the most disturbance. Alternative SC-3 (capping) requires the least excavation and presents the lowest short-term difficulties to the community. Alternative SC-6 (soil vapor extraction) would treat the soil in-place with effective controls of vapor streams. Alternatives SC-4 (excavation) and SC-5 (limited excavation) both pose the most potential inconveniences to the local community via noise, traffic and dust migration. Alternative SC-6 would only pose a small amount of risk due to the well drilling operations.

The risk of release during remedy implementation is principally limited to wind blown soil or vapor transport. Any potential environmental impacts associated with dust and vapors would be minimized with proper installation and implementation of dust and vapor control measures and by performing the excavation and on-site treatment with appropriate health and safety measures to limit the amount of material that may migrate to a potential receptor. Alternative SC-6 requires on-site treatment, but the technology is considered a low threat for potential contaminant release and, therefore, a lower short-term risk.

Alternative SC-2 (limited action) requires the least amount of time to implement; 3 months. Alternative SC-3 (capping) would take 15 months to construct, and Alternative SC-6 (soil vapor extraction) is estimated to take 5 months. Alternative SC-4 would take an estimated 8 months to implement. Alternative SC-5 would take 10 months to implement.

6. Implementability

All of the soil technologies and remedies are readily available and generally proven. The alternatives use common materials and equipment which make them technically feasible to be implemented. Alternatives SC-3 (capping) and SC-4 (excavation) are the most difficult to implement based on the need for specialty products and installation (geosynthetic liner for the cap), and the greatest amount of overall effort for construction (off-site disposal of an estimated 350 truckloads of contaminated soils). At this time, no administrative issues are expected.

7. Cost

The estimated present worth cost for Alternative SC-6 (soil vapor extraction) is \$283,700 which is less than Alternative SC-3 (capping) at \$612,200, Alternative SC-4 (excavation) at \$3,333,300, and Alternative SC-5 (limited excavation) at \$1,456,900. Alternative SC-2 (limited action) is estimated to cost \$83,800. Although the costs of Alternatives SC-3 and SC-6 are somewhat comparable, the implementation time frame for SC-6 is 10 months less.

8. State/Support Agency Acceptance

The State of New Jersey agrees with the proposed change in this Post-Decision Proposed Plan.

9. Community Acceptance

Community acceptance of the proposed change will be evaluated after the public comment period ends and will be described in the ROD Amendment for the site.

SUMMARY OF THE PROPOSED REMEDY

The proposed remedy for cleaning up the remaining contaminated subsurface soils at the D’Imperio site is Alternative SC-6 (Soil Vapor Extraction), hereafter referred to as the Preferred Alternative.

The Preferred Alternative includes the extraction of contaminated vapors from the subsurface soils within the former disposal area. Following the extraction of the residual contaminants of concern, on-site treatment for the vapors collected would be accomplished by one of the following options: 1) vapor phase granulated activated carbon, 2) thermal oxidization, or 3) treating the off-gas at the existing groundwater treatment system. This treatment option would be selected during the remedial design. Since the preferred alternative is expected to achieve the identified cleanup goals which are protective for residential land use, institutional controls, such as a deed notice or an easement, are not likely to be required. If the cleanup goals are achieved, it is possible that portions of the D’Imperio property could be used for residential development should the Township allow for re-zoning. After completion of the cleanup, EPA and NJDEP will evaluate the effectiveness of the remedy and determine whether land use restrictions are necessary.

The Preferred Alternative was selected over the other alternatives because it is expected to achieve substantial and long-term risk reduction through in-place treatment of the contaminated subsurface soils, and is expected to allow the property to be used for the reasonably anticipated future land use, which is commercial and industrial development. The Preferred Alternative reduces the risk within a reasonable time frame and at less cost than the other remedies, and provides for long-term reliability of the remedy. In addition, this preferred alternative combined with the previously implemented removal activities may reduce the duration of operation of the groundwater treatment system.

Based on the information available at this time, EPA and the State of New Jersey believe the Preferred Alternative would be protective of human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. Because it would treat the source material constituting principal threats, the Preferred Alternative would meet the statutory preference for the selection of a remedy that involves treatment as a principal element. The selected alternative can change in response to public comment or new information.

COMMUNITY PARTICIPATION

EPA and NJDEP provide information regarding the cleanup of the D'Imperio site to the public through public meetings, the Administrative Record file for the site, and announcements published in the newspaper. EPA and the State encourage the public to gain a more comprehensive understanding of the site and the Superfund activities that have been conducted there.

The dates for the public comment period, the date, location and time of the public meeting, and the locations of the Administrative Record files, are provided on the front page of this Post-Decision Proposed Plan.

For further information on the D'Imperio site, please contact:

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Table 1
NJDEP Soil Cleanup Criteria -
Remediation Goals for Residual Source Contamination in Subsurface Soils
(all values are in parts per million)

Parameter	Impact to Groundwater Soil Cleanup Criteria	Non-Residential Direct Contact Soil Cleanup Criteria	Residential Direct Contact Soil Cleanup Criteria
Volatile Organic:			
Benzene	1	13	3
2 - Butanone	50	1000	1000
Chlorobenzene	1	680	37
Chloroform	1	28	19
1,1-Dichlorethane	10	1000	570
1,2-Dichloroethane	1	24	6
1,1-Dichloroethene	10	150	8
1,2-Dichloroethene	1	1000	79
1,2-Dichloropropane		43	10
Ethylbenzene	100	1000	1000
Methylene Chloride	1	210	49
Tetrachloroethylene	1	6	4
Toluene	500	1000	1000
1,1,1-Trichloroethane	50	1000	210
Trichloroethene	1	54	23
Inorganic:			
Arsenic	4.8	20	20
Chromium	53	6,100	240
Copper	2,162	600	600
Iron			
Lead	137	600	400
Manganese			
Mercury	0.11	270	14
Zinc	3,769	1,500	1,500
Semi-Volatile Organic:			
Phenol	50	10,000	10,000